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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/550,322	07/10/2006	Luis Santos Lopez	U 015944-3	1762

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EXAMINER
MAYO III, WILLIAM H

ART UNIT	PAPER NUMBER
2831	

MAIL DATE	DELIVERY MODE
01/28/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/550,322	SANTOS LOPEZ ET AL.	
	Examiner	Art Unit	
	William H. Mayo III	2831	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 December 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4,6 and 8-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4,6 and 8-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *03 December 2007* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on December 3, 2007 has been entered.

Drawings

2. The drawings were received on December 3, 2007. These drawings are approved.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed,

had possession of the claimed invention. Specifically, the applicant's attempt to delete the terms "with a diameter less than or equal to 0.61mm" for the Background of Invention" section, involves a departure from the disclosure of the application as filed, which is confusing and doesn't describe the invention in such a way as to reasonably convey to one skilled in the relevant art. The applicant has stated that such conductors having a diameter less than or equal to 0.61mm is in accordance with the requirements of classes V & VI of the standard IEC-60228 and also claims such in claim 21. The actual standard specifically states that such diameters are included in the IEC standard. Therefore, such a deletion warrants new matter/scope, which is not supported by the original specification/oath. Based on the above comments, the amendment will not be entered.

Claim Objections

5. Claim 24 is objected to because of the following informalities: In line 6, please replace the term "polygonal" with the term "polygonal". Appropriate correction is required.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 1-2, 4, 6, and 8-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rost (Pat Num 2,123,746) in view of Applicant's Own Admission of Prior Art (herein referred to as AOAPA). Rost discloses a metallic conductor (Figs 1-3) for electrical cable (Col 1, lines 1-4). Rost discloses a metallic conductor (Figs 1-3) for electrical cable (Col 1, lines 1-4). Specifically, with respect to claim 1, Rost discloses a metallic conductor (1b) capable of being a low tension electrical conductor, comprising a

collected assembly of wires (Fig 3), wherein the conductor (1b) assumes a polygonal cross section comprising at least one curved side (Fig 3). With respect to claim 2, Rost discloses that the polygonal cross section comprises at least one straight side (Fig 3). With respect to claim 3, Rost discloses that the polygonal cross section comprises at least one straight side and one curved side (Fig 3). With respect to claim 4, Rost discloses that the polygonal cross section is a circular sector (Fig 3). With respect to claim 6, Rost discloses that the conductor (1b) is surrounded by a layer of insulating material (2b). With respect to claim 7, Rost discloses that the insulating material (2b) may be may of thermoplastic material comprising vinyl compound (Col 2, lines 10-29). With respect to claim 8, Rost discloses an electrical cable (Fig 3) comprising a plurality of conductors (1b), wherein the conductors (1b) are insulated from each other by an insulating material (2b) and grouped together by a cabling process under a covering (3b), wherein the conductors (1b) assume a predetermined polygonal arrangement comprising a curved side (Fig 3). With respect to claim 9, Rost discloses that the polygonal cross section comprises at least one straight side (Fig 3). With respect to claim 10, Rost discloses that the polygonal cross section comprises at least one straight side and one curved side (Fig 3). With respect to claim 11, Rost discloses that the polygonal cross section is a circular sector (Fig 3). With respect to claim 14, Rost discloses that the polygonal arrangement is surrounded by a metallic protective material (4b & 5b). With respect to claim 15, Rost discloses that the protective material (4b) is a metallic protective material (Col 4, lines 3-4). With respect to claim 16, Rost discloses that the protective material (5b) may be a thermoplastic protective material (i.e.

insulating layer, Col 4, lines 5-10). With respect to claim 18, Rost discloses that the polygonal arrangement is surrounded by a combination of protective materials (4b & 5b). With respect to claim 19, Rost discloses a method of forming a metallic conductor comprising a collected assembly of wires (Fig 3), wherein the conductor (1b) assumes a polygonal cross section comprising at least one curved side (Fig 3) deforming, using a mechanical means of deformation (i.e. extruder), of the metallic conductor (1b) comprising a plurality of round metallic wires (not numbered) to form a polygonal cross section, and extruding an protective covering (4b & 5b) around the metallic conductor (1b) in a preceding operation (Col 1, lines 1-35). With respect to claim 20, Rost discloses that the polygonal cross section comprises at least one straight side and one curved side (Fig 3).

However, Rost doesn't specifically disclose the wire being flexible wherein the diameter of each wire are less than or equal to 0.61mm (claims 1, 8, & 19), nor the polygonal arrangement being rectangular (claim 12), nor the conductor comprising different polygonal cross sections (claims 13 & 20), nor the cable being flexible to meet classes V & VI of IEC-60228 standard (claim 21), nor the cable being sufficiently capable of being coiled on a spool (claim 22).

AOAPA teaches that multicore cables are commonly utilized as carrying power signals. Specifically, with respect to claims 1, 8, 12-13, and 19-22, AOAPA teaches that multi-core cables are commonly flexible because each multi-wire conductor is composed of flexible conductors having a diameter of less than 0.61mm in accordance with the requirements of classes V & VI of IEC-60228 standard and therefore inherently

being able to be coiled on a spool, and wherein the insulated conductors are commonly formed utilizing different configurations such as triangular configurations (See paragraph 4 & 5 under Characterization of Invention).

With respect to claims 1 and 21-22, it would have been obvious to one of ordinary skill in the art of cables to modify the conductors of Rost to be flexible as taught by AOAPA because AOAPA teaches that such a configuration is commonly utilized as power carrying conductors (paragraph 3).

With respect to claim 1, 8, & 19, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the metallic wire of Rost to comprise the diameter of each wire being 0.61mm, as taught by AOAPA, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller, 105 USPQ 233.*

With respect to claims 12-13 and 20, it would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the polygonal arrangement to comprise a rectangular shape and the conductor to comprise various different polygonal cross sections since it has been held that a change in form cannot sustain patentability where involved is only extended application of obvious attributes from a prior art. *In re Span-Deck Inc. vs. Fab-Con Inc. (CA 8, 1982) 215 USPQ 835.*

10. Claims 22-23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chase (Pat 1,370,731) in view of Applicant's Own Admission of Prior Art (herein

referred to as AOAPA). Chase discloses a metallic conductor (Fig 8) for electrical cable (Col 1, lines 9-11). Specifically, with respect to claims 22-23, Chase discloses electrical cable (Fig 8), consisting of a plurality of metallic conductors (61), each of the conductors (61) comprising insulation layer (62), wherein the conductor (61) and insulation layer (62) assumes a polygonal cross section comprising at least one curved side (Fig 8) and a protective sheath (68) covering the plurality of insulated conductors (61 & 62, respectively).

However, Chase doesn't specifically disclose the conductor being made of a plurality of flexible wires nor the cable being flexible, nor the plurality of flexible wires having a diameter of less than 0.61mm (claims 23-24).

AOAPA teaches that multicore cables are commonly utilized as carrying power signals. Specifically, with respect to claim 23, AOAPA teaches that multi-core cables are commonly flexible because each multi-wire conductor is composed of plurality of flexible wires having a diameter of less than 0.61mm in accordance with the requirements of classes V & VI of IEC-60228 standard and therefore inherently being able to be coiled on a spool, and wherein the insulated conductors are commonly formed utilizing different configurations such as triangular configurations (See paragraph 4 & 5 under Characterization of Invention).

With respect to claims 23-24, it would have been obvious to one of ordinary skill in the art of cables to modify the conductors of Chase to be flexible as taught by AOAPA because AOAPA teaches that such a configuration is commonly utilized as power carrying conductors (paragraph 3).

With respect to claims 23-24, it would have been obvious to one of ordinary skill in the art of cables to modify the conductors of Chase to be flexible as taught by AOAPA because AOAPA teaches that such a configuration is commonly utilized as power carrying conductors (paragraph 3).

With respect to claim 23-24, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the metallic wire of Chase to comprise the diameter of each wire being 0.61mm, as taught by AOAPA, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller, 105 USPQ 233.*

Response to Arguments

11. Applicant's arguments filed December 3, 2007 have been fully considered but they are not persuasive. Specifically, the applicant argues the following:

A) There was not intention for the AOAPA to disclose the conductors having a diameter of less than 0.6 mm and therefore such is deleted.

B) In light of the deletion, neither Rost nor Chase discloses the conductors having a diameter of less than 0.6 mm and therefore the 35 USC 103(a) rejection is improper.

With respect to argument A & B, the examiner respectively traverses. The applicant should be reminded that the Oath/Declaration states:

ACKNOWLEDGMENT OF REVIEW OF PAPERS AND DUTY OF CANDOR

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

By signing the Oath/Declaration, the applicant is specifically stating that he/she has read the contents of the specification and that such is proper and correct. The examiner points out, that the applicant hasn't previously stated that such an error had been made after the non-final rejection mailed on August 8, 2006. Secondly, it is apparently clear also that the IEC-60228 standard indeed incorporates the particular stranded wires having the diameters of 0.61 mm. American Wire Gauges (AWG) also denotes the such stranded wires having diameters of 0.61mm consists of 22 through 42AWG wires, which are commonly utilized as metallic conductors (see Engineering Design Guide, stranded wire chart). The applicant also states that the diameter of the wires are responsible for flexibility, however the examiner would like to state the following. It is well known in the art, that stranded conductors provided the flexibility that solid conductor cannot. While conductor diameters contribute some flexibility, this characteristic is obtained by the stranding of the conductors (see Engineering Design Guide, Conductor Section). In light of the above comments, the examiner respectfully submits that AOAPA clearly teaches that conductors having a diameter of less than 0.6mm are well known in the art. IEC and AWG also verify that such a diameter is also well known in the art, as many of the gauges commercially available and commonly utilized in the forming of electrical conductors, are incorporated in this range. Engineering Design Guide, published by C & M Corp also verifies that this range of

conductor diameter is readily available and commonly utilized to provide cables with increased flexibility. Therefore, the examiner respectfully submits that the 35 USC 103(a) rejections of claims 1-2, 4, 6, and 8-24, is proper and just.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. It is C & M Corp publication entitled, Engineering Design Guide, 3rd Edition, which describes commonly known and commercially available cable constructions.

Communication

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Mayo III whose telephone number is (571)-272-1978. The examiner can normally be reached on M-F 8:30am-6:00 pm (alternate Fridays off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego F.F. Gutierrez can be reached on (571) 272-2245 or (571) 272-2800 ext 31. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

William H. Mayo III
Primary Examiner
Art Unit 2831

WHM III
January 20, 2008

Approved
11/20/08

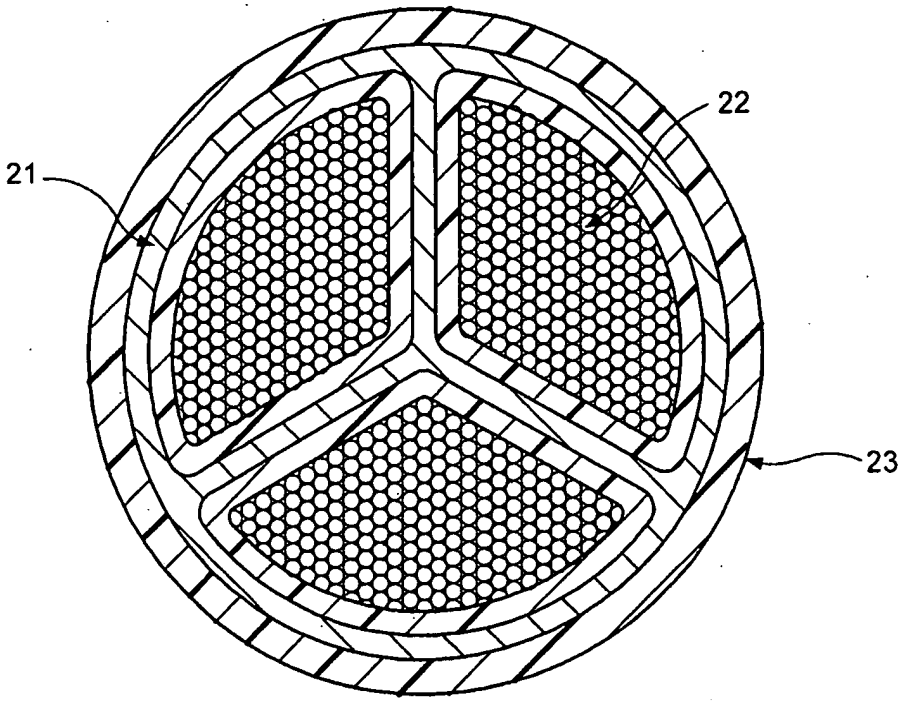

FIG. 1